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SOME PLANTS OF THE SOUTHBURY TRIASSIC AREA.

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THE small area of Triassic sandstone with its accompanying trap ridges, which lies in the towns of Southbury and Woodbury, Connecticut, has long been of interest to geologists, and full descriptions of it from a geological point of view may be found in publications of the U. S. Geological Survey.

During the past few years the writer has had occasional opportunities for botanizing in parts of this area, and has found it unusually rich in species rare in the state and in New England.

The area underlaid by Triassic rocks is roughly oval in outline and is some six miles in length (north and south) by about three miles in width. It is generally below the level of the surrounding country and is divided into an eastern and a western valley by a group of trap ridges which run a little east of north through the central part. A small river, the Pomperaug, is formed at the northerly end of the valley by the junction of smaller tributaries and flows at first southwestwardly in the western valley but soon turning passes through a break in the central ridge and flows southerly through the eastern valley, then turning westerly sweeps in a broad curve around the end of the central highland and entering the western valley again flows northward as if bent on returning to its source. After about a mile, however, it turns in an acute angle to the southwest and enters the Housatonic river opposite its circuit of the ridge.

Three villages lie in the area,—Woodbury in the western valley at the north, Southbury in the central and southern part of the eastern valley, and South Britain in the southerly part of the western valley. The towns of Southbury and Woodbury divide the area between them,

with perhaps the greater part in Southbury, which includes South Britain.

My explorations have to a large extent been made from South Britain as a base but have included most of the territory to some degree. A locality of special interest is formed at South Britain by the river shores and alluvial meadows extending southerly from the acute angle of the river some half a mile until the river enters the granitic rocks. Here, close to the caving river bank, I collected, three or four years ago, a *Panicum* which at the time was taken for *P. villosissimum* Nash and some specimens were distributed under that name. Later, Mr. C. H. Bissell reported that his specimen from this collection had been determined by Prof. A. S. Hitchcock as *P. pseudo-pubescens* H. & C., but on sending my specimens to Prof. Hitchcock they were named *P. scoparioides* Ashe. I was somewhat puzzled but visited the locality again and found that both the latter species were growing there together, so that my first collection must have been of mixed material.

On the alluvial meadows here we find an abundance of *Tradescantia virginica* L. growing over a considerable area, perhaps a quarter of a mile in either direction from the *Panicum* station and on both sides of the river. The region was settled very early and this is possibly introduced but it appears to be native and, if so, this is probably the most northeasterly known native station. The river banks and thickets here furnish *Arabis glabra* (L.) Bernh. and an abundance of *Floetkea proserpinacoides* Willd. both of which seem to be rare in the state. In the summer of 1911 as I was passing by a thicket where *Floerkea* made a carpet in the spring, I saw a dodder which appeared to be strange. I was somewhat skeptical at first as our common *Cuscuta Gronovii* Willd. has a way of appearing in strange forms, but this proved to be *Cuscuta obtusiflora* HBK. new to New England and scarcely more than 300 feet from the only known New England station for *Panicum pseudo-pubescens*: while the single New England station for *Phlox pilosa* L. (see RHODORA 1: 76) is about a mile distant. As far as yet known these meadows yield no more species unique in New England or even in Connecticut, but several rare or interesting forms occur, among them *Carex trichocarpa* Muhl. which has been known from Connecticut only a few years but here as elsewhere grows in masses in the swales, then *Viola scabriuscula* Schwein. and *Claytonia virginica* L. are abundant in their season, while *Antennaria canadensis* Greene and *Monarda fistulosa* L. occur sparingly.

Turning now to the trap ridges which overlook the village of South Britain from the east we find a little pool near the summit bordered by a growth of *Populus heterophylla* L. not known elsewhere within 25 miles; while on the drier rocky slopes *Cypripedium parviflorum* Salisb., *Aristolochia Serpentaria* L., *Parietaria pennsylvanica* Muhl. and *Ranunculus fascicularis* Muhl. grow sparingly. A small amount of *Pellaea atropurpurea* Link. grows here in crevices of sandstone and is also found in Woodbury on trap.

On the second ridge eastward Mr. A. E. Blewitt discovered the showy *Cynthia*, *Krigia amplexicaulis* Nutt., growing on a rather dry stony roadside remote from dwellings or cultivation.

At the southern end of one of these ridges overlooking the river is the type locality of *Arabis viridis* Harger (RHODORA 13: 37). This also occurs sparingly near the station for *Populus heterophylla* L. and was collected by Dr. E. H. Eames in Orenaug Park, Woodbury on a trap ridge at the northerly end of the area.

Returning again to the lowland, as we go from South Britain toward Southbury we find the roadside bordered with *Dipsacus sylvestris* L. while a meadow near is yellow with *Galium verum* L. and nearly opposite is found *Physalis virginiana* Mill. Along the parallel road south of the river *Agrimonia parviflora* Ait. and *Linum sulcatum* Riddle, have been found, the latter occasional through the eastern valley into Woodbury. Just at the southern limit of the Triassic is located the station for *Phlox pilosa* L. already mentioned and with it or near by grow *Anemone cylindrica* Gray and *Convolvulus spithameus* L. while another dodder, *Cuscuta arvensis* Beyrich, was collected in a field near by.

Passing now into the eastern valley we find staminate *Salix alba* L. var. *vitellina* Koch. along a tributary of the Pomperaug and formerly there was a quantity of *Monarda didyma* L. in a fence-row along the road. A little farther north *Cuphea petiolata* Jacq., *Verbena angustifolia* Michx. and *Aster amethystinus* Nutt. grow in dry soil on one farm and near the northern limit of Southbury one of the "king devil" weeds, *Hieracium pratense* Tausch. (probably), is gaining a good foothold in a dry field. On a roadside near by the writer discovered *Senecio Balsamitae* Muhl. var. *praelongus* Greenm., the first record for this part of the state. This was later collected in Woodbury by Eames and Godfrey.

Passing now into the town of Woodbury we find a small sphagnum

bog at the southerly end of the village which contains a quantity of *Kalmia polifolia* Wang., the most southerly record for the state. Across a sandy ridge from this bog on the banks of the Pomperaug I found in 1884 *Hibiscus Moscheutos* L. The date of this record is of interest as the adjacent country has since been planted with native and exotic showy species and the present-day collector, if he found the rose-mallow there, would be apt to take it for a planted specimen; but in 1884 the place was entirely "unimproved."

Along a road leading westerly from the village of Woodbury and in the adjacent fields are a quantity of *Avena pubescens* Huds. and *Galium Mollugo* L., the former new to the state. Farther to the westward the upper reaches of a pond are covered with *Wollfia columbiana* Karst., here discovered by Eames & Godfrey, and near by along a brook grows *Carex tribuloides* Wahlenb. var. *reducta* Bailey. Other noteworthy species of Woodbury have been mentioned in connection with their occurrence farther south.

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SOME NORTH AMERICAN RELATIVES OF POLYGONUM MARITIMUM.

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IN studying a glaucous large-fruited *Polygonum* which abounds on the sandy beaches of the Magdalen Islands and on some of the sands of western Newfoundland, Cape Breton and Prince Edward Island, it has been necessary to examine in some detail the plants which have passed in America as *Polygonum maritimum*. One of these, *P. Fowleri* Robinson, is sufficiently distinct in aspect as well as in habitat to need little discussion here, although it is worthy of note that this species of damp saline shores from the Straits of Belle Isle to the mouth of the Kennebec seems nowhere to encroach on the areas occupied by either of the other two plants to be discussed; for, while one of them is known only from the sands of western Newfoundland and the islands of the Gulf of St. Lawrence and the other follows the